

Giant Mucinous Ovarian Cystadenomas in Postmenopausal Women

Yuka Yokoi, Yoshiaki Furukawa, Emiko Aiba, Satoshi Ichigo, Kazutoshi Matsunami and Atsushi Imai*

Department of Obstetrics and Gynecology, Matsunami General Hospital, Japan

***Corresponding author:** Atsushi Imai, Department of Obstetrics and Gynecology, Matsunami General Hospital, 185-1 Dendai, Kasamatsu, Gifu 501-6062, Japan

ARTICLE INFO

Received: 📅 February 24, 2026

Published: 📅 March 18, 2026

Citation: Yuka Yokoi, Yoshiaki Furukawa, Emiko Aiba, Satoshi Ichigo, Kazutoshi Matsunami and Atsushi Imai. Giant Mucinous Ovarian Cystadenomas in Postmenopausal Women. Biomed J Sci & Tech Res 65(1)-2026. BJSTR. MS.ID.010140.

ABSTRACT

Mucinous cystadenomas may enlarge progressively into substantial masses and frequently remain clinically silent until they attain giant proportions, often being incidentally identified during routine physical examinations or imaging studies. In postmenopausal women or in cases with suspected malignancy, total hysterectomy with bilateral salpingo-oophorectomy constitutes the preferred surgical approach. The management of massive ovarian tumors is associated with considerable risks, including profound hypotension, increased venous return, cardiac decompensation, respiratory compromise, and intestinal distention. Postoperative complications frequently result from abrupt hemodynamic alterations, notably the development of pulmonary edema. The management of these high-risk cases necessitates a multidisciplinary strategy, with rigorous intraoperative and postoperative surveillance to prevent adverse outcomes.

Introduction

Giant ovarian tumors have become increasingly uncommon owing to the early detection of adnexal pathology facilitated by the widespread use of advanced imaging modalities in contemporary clinical practice [1,2]. In the literature, large or giant ovarian cysts are typically defined as lesions exceeding 20 cm in diameter or extending above the level of the umbilicus. Ovarian cystadenomas are frequently discovered incidentally, often in the absence of specific clinical manifestations, though complicated presentations may include abdominal pain. Among these, mucinous cystadenomas are more prevalent and

possess the capacity to enlarge substantially while remaining undiagnosed until reaching considerable dimensions, commonly detected incidentally during routine physical examinations or radiologic imaging [3-5]. If left untreated, they may attain remarkable size and give rise to serious complications such as abdominal compartment syndrome [6] and cyst rupture [7], both of which necessitate urgent surgical intervention. The objective of this mini-review is to underscore such presentations in surgically high-risk postmenopausal women and to expand the existing literature pertaining to this age group, including our cases (see Figure 1).

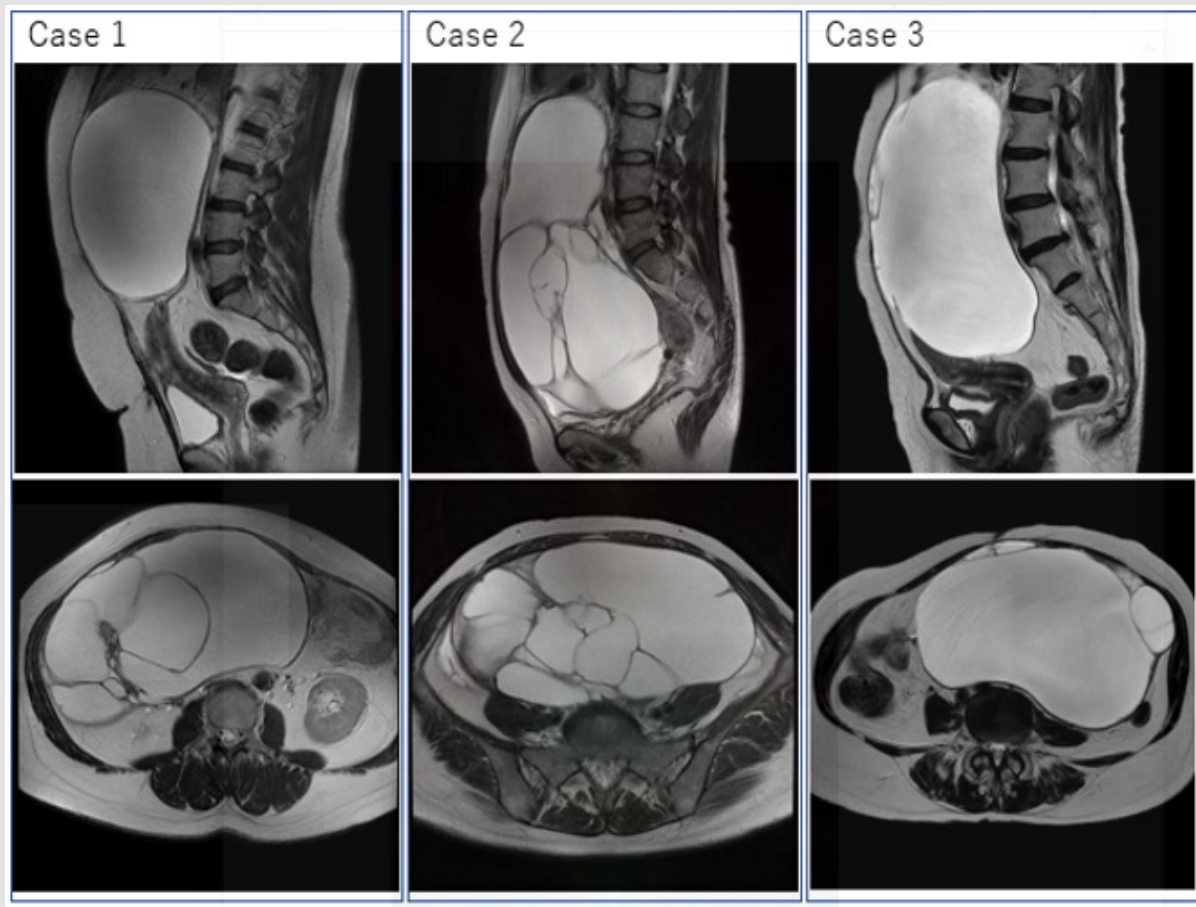


Figure 1: T2-weighted MRI of our cases, sagittal section (upper) and transverse section (lower).

- **Case 1:** A 53-year-old postmenopausal woman presented to the outpatient department with progressively increasing abdominal distension first noted one year prior to evaluation. The swelling was accompanied by diffuse, vague abdominal pain for six months. Magnetic resonance imaging demonstrated a right ovarian cyst with multiple thin septations measuring $166 \times 108 \times 228$ mm. A total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Histopathological examination confirmed a benign mucinous cystadenoma of the ovary.
- **Case 2:** A 54-year-old postmenopausal woman presented with progressive abdominal enlargement and a sensation of heaviness, accompanied by groin discomfort and pronounced constipation for approximately six months, and was initially evaluated by her family physician. MRI revealed a massive septated cystic lesion occupying the entirety of the abdominal and pelvic cavities, exerting significant mass effect on adjacent intra-abdominal structures. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was undertaken. Final histopathological analysis confirmed mucinous cystadenoma of the ovary.
- **Case 3:** A 70-year-old postmenopausal woman was referred from a local health center with a palpable pelvic mass of six months' duration. She was asymptomatic at presentation. MRI demonstrated a large multilocular left adnexal cyst with thin, smooth walls and clear anechoic contents measuring approximately $193 \times 190 \times 116$ mm. Total abdominal hysterectomy with bilateral salpingo-oophorectomy and intact excision of the giant left ovarian cyst were performed. Histopathological findings were consistent with benign mucinous cystadenoma of the ovary, with no evidence of malignant cells or nuclear atypia.

Clinical Presentation and Diagnosis

Mucinous cystadenomas can progressively enlarge into massive lesions and frequently remain undetected until they achieve giant dimensions, typically being identified incidentally during routine clinical examinations or ultrasonography. The most commonly reported symptoms include abdominal bloating, progressive distension, fatigue, urinary disturbances, and pelvic or abdominal discomfort. Gastrointestinal manifestations-such as abdominal pain, pressure sensation, flatulence, constipation, or diarrhea-are also frequently

documented, in addition to dyspnea, particularly in the supine position or during ambulation. Physical and pelvic examination may initially raise suspicion when a sizable adnexal mass is palpable; however, definitive characterization requires imaging studies. Magnetic resonance imaging (MRI) is recommended as a complementary modality for comprehensive preoperative assessment [8,9]. MRI provides superior soft-tissue contrast resolution, facilitating the identification of subtle intracystic nodules and papillary projections that may suggest borderline pathology.

Managements

In postmenopausal women or when malignancy is suspected, total hysterectomy with bilateral salpingo-oophorectomy is generally advocated. Although laparoscopy represents a first-line approach for many adnexal cysts, its applicability in the management of giant cysts remains limited. Technical constraints, particularly restricted operative space, render laparoscopic excision of extremely large ovarian cysts feasible only in highly selected cases and in the hands of experienced surgeons. Although cystadenomas are benign epithelial neoplasms, rare cases of coexistence with anaplastic carcinoma or malignant ovarian Brenner tumors have been reported [10]. According to available literature, mucinous tumors are typically unilateral, as observed in our cases (Figure 1), and are classified as benign (75%), borderline (15%), or malignant (10%). If untreated, these neoplasms may progress to invasive mucinous carcinoma [3-5,11]. Benign ovarian mucinous cystadenomas constitute the majority of mucinous tumors [3-5,11]. They are capable of attaining extraordinary dimensions and rank among the largest tumors recorded in the human body, as exemplified by our patients. In postmenopausal women, the incidence of borderline ovarian tumors declines significantly and is therefore relatively uncommon. Mucinous tumors most frequently arise during the fifth and sixth decades of life; however, their true incidence in postmenopausal women may be underestimated due to earlier detection. Our patients were 53, 54, and 70 years of age and postmenopausal at the time of diagnosis.

In addition to serious complications such as torsion [6], rupture [7], and ascites, prior reports emphasize the potential for life-threatening events in patients with giant ovarian tumors, including pulmonary and cardiac failure, pulmonary embolism, and sepsis [1,12,13]. These risks are amplified by the physiological challenges inherent in managing massive tumors, which may precipitate severe hypotension, increased venous return, cardiac dysfunction, respiratory compromise, and intestinal distention. Postoperative complications often stem from rapid circulatory shifts, particularly the development of pulmonary edema [1,12,13]. One notable concern is supine hypotensive syndrome, resulting from compression of major blood vessels in the supine position; this may provoke abrupt reductions in intrathoracic and intracavitary pressures, leading to significant hemodynamic instability. Accordingly, the management of these high-risk cases mandates a multidisciplinary approach and meticulous intraoperative and postoperative monitoring to mitigate potential complications.

Conclusion

Although rare in postmenopausal women, giant mucinous ovarian cystadenomas may pose substantial risks if not promptly diagnosed and appropriately managed, with a potential for malignant transformation. Heightened clinical awareness may facilitate earlier detection and more comprehensive documentation of such cases.

Conflict of Interest

The authors declare no conflict of interest.

References

1. Sadlecki P, Dejewska K, Domieracka P, Walentowicz Sadlecka M (2025) Giant borderline ovarian tumours - review of the literature. *Open Med (Wars)* 20(1): 20251267.
2. Fatema N, Mubarak Al Badi M (2018) A postmenopausal woman with giant ovarian serous cyst adenoma: a case report with brief literature review. *Case Rep Obstet Gynecol* 2018: 5478328.
3. Lugata J, Maringo G, Mremi A, Batchu N, Mchome B, et al. (2024) Giant mucinous borderline tumor of the ovary in a postmenopausal woman: A rare case report and review of the literature. *Int J Surg Case Rep* 124: 110423.
4. Akhras LN, Akhras LN, Farooq S, AlSebay L (2019) A 27-kg giant ovarian mucinous cystadenoma in a 72-year-old postmenopausal patient: a case report. *Am J Case Rep* 1(20): 1601-1606.
5. Svetlana S, Semkov A, Karamisheva V (2025) Two cases of giant mucinous cystadenomas in postmenopausal women. *J Surg Case Rep* 2025(1): rjae833.
6. Khormi GJ, Ageeli RS, Othathi RJ, Bingasem SM, Al Ghadeeb M (2022) Abdominal compartment syndrome due to large ovarian cystadenoma: a case report. *Cureus* 14(11): e31389.
7. Sheokand S, Siwatch S, Kundu R, Saha PK (2023) A rare case of infection and spontaneous rupture in ovarian mucinous cystadenoma. *BMJ Case Rep* 16(12): e253329.
8. Benlghazi A, Belouad M, Messaoudi H, Benali S, Elhassani MM, et al. (2023) Giant ovarian serous cyst and postmenopausal adnexal torsion: An unusual case report and literature review. *Int J Surg Case Rep* 110: 108686.
9. Thakur M, Timmerman D (2017) Imaging of adnexal masses. *Clin Obstet Gynecol* 60(1): 38-45.
10. Zou C, Li Q, Zhao J, Chen Y (2022) Coexistence of malignant ovarian Brenner tumor and borderline mucinous cystadenoma, combined with primary uterine corpus endometrioid carcinoma: a case report and literature review. *Oncol Lett* 24(2): 272.
11. Kluz T, Bogaczyk A, Wita Popów B, Habało P, Kluz Barłowska M (2023) Giant ovarian tumor. *Medicina (Kaunas)* 59(10): 1833.
12. Amadasi A, Andreola S, Bianchi M, Boracchi M, Gentile G, et al. (2019) Pulmonary thromboembolism secondary to pelvic thrombosis related to giant ovarian tumor. *Autops Case Rep* 9(1): e2018061.
13. Cai S, Dai R, Mi J, Wang S, Jiang Y (2020) Perioperative management of a patient with a giant ovarian tumor: A case report. *Med (Baltim)* 99(41): e22625.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2026.65.010140

Atsushi Imai. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>